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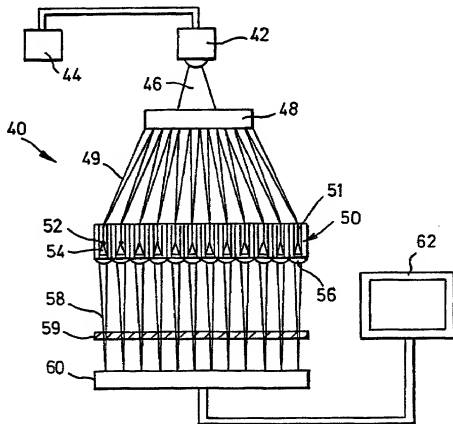
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(54) Title: ASSAY SYSTEM



(57) Abstract: A method and apparatus are disclosed for performing multiple biochemical assays simultaneously. The apparatus (40) includes a laser light source (42), a diffraction grating (48) to diffract the light into multiple excitation beams, a sample holder (50) containing multiple samples (52) to be assayed, and a detection device (60) for detecting radiation either emitted or transmitted by the samples. The invention has application in fluorescence assays, or absorbance assays such as ELISAs. Also disclosed are sample holders for use in the method described, and diffraction gratings. A further modification describes the use of the method for generating DNA chips and the like by photochemistry.

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